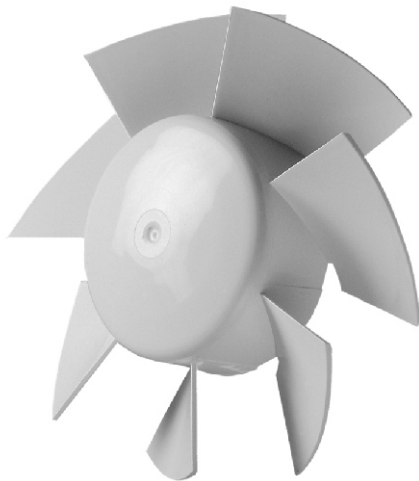


# VENTS SERIES DOMESTIC ELECTRIC FANS

## User's Manual

2006



## DESIGNATION

"VENTS" fans are designed for ventilation of domestic and similar premises (apartments, offices, stores, garages, kitchens, bathrooms, toilets and other rooms, heated in wintertime).

Fans (but for VKO series) are exhaust fans and are designed for wall or ceiling mounting.  
MAO-series fans are to be installed in windows.

VKO-series fans may be used for both input and output ventilation and are to be installed in ventilation ducts.

VENTS fans are designed for continuous work without switching off mains.

Design of the fans is constantly improved and updated, and some models may differ from what is described in this manual.

## BASIC SPECIFICATIONS

Fans identification, diagrammatic representation of appearance, installation dimensions and peculiarities of design are given in Table 1.

The fans are designed for operation from AC power supply with voltage of 220-240 V and frequency of 50 Hz or 12 V and frequency of 50 Hz (depends upon the model).

Nominal output in terms of extract air capacity is:

- for fans with 100 mm outlet capacity: 82 - 107 m<sup>3</sup>/h ( 5%)
- for fans with 125 mm outlet capacity: 157 - 232 m<sup>3</sup>/h ( 5%)
- for fans with 150 mm outlet capacity: 260 - 348 m<sup>3</sup>/h ( 5%)

Nominal electric power of the fans is:

- for fans with 100 mm outlet capacity: - 9/22 W
- for fans with 125 mm outlet capacity: - 16/26 W
- for fans with 150 mm outlet capacity: - 24/32 W

Equalized sound level at 3 m distance does not exceed 40 dBA.  
Fans are designed for operation at air temperature within 0°C to 45°C.

Durability not less than 5 years.



## IDENTIFICATION

X X X X X X X X X X X

100, 125, 150 - outlet capacity of the fan

VKO, VKO1, M, MA, M1, M3, MAO1, MAO2 - indication

K, K1, PF, PF1, D, D1, S, S1, F, LD, LD1, X, X1 of fan series

V - supplied with switch

T - supplied with timer

TH - supplied with timer and humidity relay

TP - supplied with timer and motion sensor

K - supplied with back valve

L - motor with ball-bearings

turbo

press

12 - low voltage motor 12 V

Q - quiet operation motor

### Example of symbolic notation:

VENTS 125 DVTK fan with 125 mm outlet capacity, D-series, supplied with switch, timer, back valve

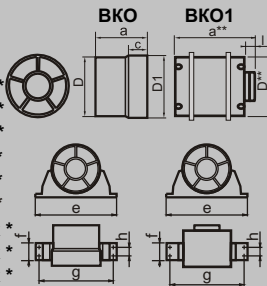


**VENTS 100 VKO \***  
**VENTS 125 VKO \***  
**VENTS 150 VKO \***

**VENTS 100 VKO1 \***  
**VENTS 125 VKO1 \***  
**VENTS 150 VKO1 \***

**VENTS 100 VKOk \***  
**VENTS 125 VKOk \***  
**VENTS 150 VKOk \***

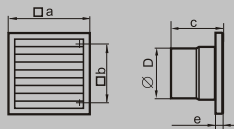
**VENTS 100 VKO1k \***  
**VENTS 125 VKO1k \***  
**VENTS 150 VKO1k \***



\*- VKO(k) and VKO1(k) - series fans of all modifications

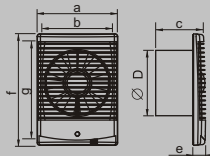
**VENTS 100 K \***  
**VENTS 125 K \***  
**VENTS 150 K \***

**VENTS 100 K1 \***  
**VENTS 125 K1 \***



\*- K and K1- series fans of all modifications

**VENTS 100 M3 \***  
**VENTS 125 M3 \***  
**VENTS 150 M3 \***



\*- M3- series fans of all modifications

table 1

Type	a/a**	D1	D/D**	c	l
100 VKO/VKO1	85/119	104	100/98	32	30
125 VKO/VKO1	85/118	129	125/123	32	30
150 VKO/VKO1	105/128	154	150/148	48	30

Mounting inside air duct connected on both sides.

\*\* -series fans VKO1

Type	e	g	h	f
100 VKOk/VKO1k	160	144	29	45
125 VKOk/VKO1k	185	169	29	45
150 VKOk/VKO1k	200	184	29	45

Supplied with mounting corbel for mounting to flat surface.

Type	a	b	c/c**	D	e/e**
100 K/ K1	154	110	100/104	100	15/19
125 K/ K1	187	142	100/104	125	15/19
150 K	250	214	118	150	15

Mounting on air duct from air-charging side. Supplied with detachable "K" or "K1" type grille on air-suction side.

\*\* -series fans K1

Type	a	b	c	D	e	f	g
100 M3	188	155	85	100	30	256	226
125 M3	188	155	91	125	30	256	226
150 M3	188	155	115	150	30	256	226

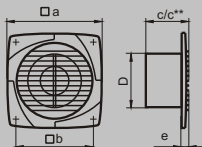
Mounting on air duct from air-charging side



**VENTS 100 D \***  
**VENTS 125 D \***  
**VENTS 150 D \***

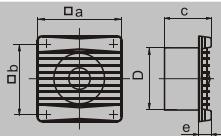
**VENTS 100 D1 \***  
**VENTS 125 D1 \***  
**VENTS 150 D1 \***

\*- D and D1-series fans of all modifications



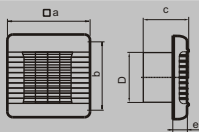
**VENTS 100 M \***  
**VENTS 125 M \***  
**VENTS 150 M \***

\*- M-series fans of all modifications



**VENTS 100 MA \***  
**VENTS 125 MA \***  
**VENTS 150 MA \***  
**VENTS 100 M1 \***  
**VENTS 125 M1 \***  
**VENTS 150 M1 \***

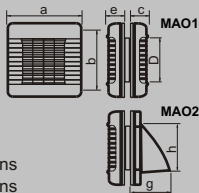
\*- MA and M1-series fans of all modifications



**VENTS 125 MAO1 \***  
**VENTS 150 MAO1 \***

**VENTS 125 MAO2 \***  
**VENTS 150 MAO2 \***

\*- MAO1 and MAO2-series fans  
 table 1 of all modifications



Type	a	b	c**	D	e
100 D\D1	150	120	108/93	100	12
125 D\D1	176	140	114/96	125	13
150 D\D1	205	165	132	150	15

Mounting on air duct from air-charging side

\*\* -series fans D1

Type	a	b	c	D	e
100 M	160	135	90	100	25
125 M	180	150	94	125	25
150 M	207	182	106	150	25

Mounting on air duct from air-charging side

Type	a	b	c	D	e
100 MA\M1	166	150	90	100	30
125 MA\M1	186	170	94	125	30
150 MA\M1	207	187	110	150	30

Mounting on air duct from air-charging side

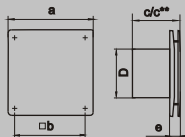
MA supplied with automatically opening louvers.

Type	a	b	e	c	D	g	h
125 MAO1	186	173	60	53	125	—	—
125 MAO2	186	173	60	—	125	123	160
150 MAO1	210	195	66	60	150	—	—
150 MAO2	210	195	66	—	150	156	183

Mounting on the windows.

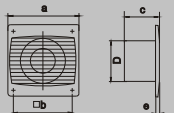


**VENTS 100 LD \***  
**VENTS 125 LD \***  
**VENTS 150 LD \***  
**VENTS 100 LD1 \***  
**VENTS 125 LD1 \***  
**VENTS 150 LD1 \***



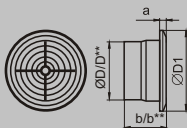
\* - LD and LD1 - series fans of all modifications

**VENTS 100 S \***  
**VENTS 125 S \***  
**VENTS 150 S \***  
**VENTS 100 S1 \***  
**VENTS 125 S1 \***  
**VENTS 150 S1 \***



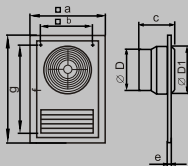
\* - S and S1 - series fans of all modifications

**VENTS 100 PF \***  
**VENTS 125 PF \***  
**VENTS 150 PF \***  
**VENTS 100 PF1 \***  
**VENTS 125 PF1 \***  
**VENTS 150 PF1 \***



\* - PF and PF1 - series fans of all modifications

**VENTS 100 F \***  
**VENTS 125 F \***



\* - F - series fans  
of all modifications

table 1

Type	a	b	c/c**	D	e
100 LD\LD1	150	120	126/111	100	30
125 LD\LD1	176	140	134/116	125	30
150 LD\LD1	205	165	153	150	30

Mounting on air duct from air-charging side

\*\* - series fans LD1

Type	a	b	c/c**	D	e
100 S\S1	150	120	108/93	100	12
125 S\S1	176	140	114/96	125	12
150 S\S1	205	165	132	150	13

Mounting on air duct from air-charging side

\*\* - series fans S1

Type	a	b/b**	D/D**	D1
100 PF\PF1	12	99/127	100/99	141
125 PF\PF1	14	100/134	125/123	166
150 PF\PF1	15	116/146	150/146	188

Mounting on air duct from air-charging side

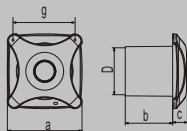
\*\* - series fans PF1

Type	a	b	c	D	e	D1	f	g
100 F	182	160	99	125	10	141	252	226
125 F	182	160	100	125	10	166	252	226

Mounting on air duct from air-charging side



**VENTS 100 X \***  
**VENTS 125 X \***  
**VENTS 150 X \***

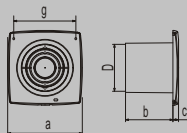


Type	a	b	c	D	g
100 X	151	96	30	100	120
125 X	178	101	30	125	140
150 X	204	117	30	150	165

Mounting on air duct from air-charging side

\* - X- series fans of all modifications

**VENTS 100 X1 \***  
**VENTS 125 X1 \***  
**VENTS 150 X1 \***



Type	a	b	c	D	g
100 X1	151	96	12	100	120
125 X1	178	101	13	125	140
150 X1	204	117	14	150	165

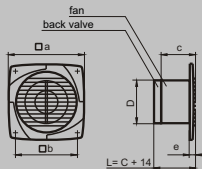
Mounting on air duct from air-charging side

\* - X1- series fans of all modifications

table 1



M, D, D1, S, S1, M1, M3, LD, LD1, X, X1 series fans can be supplied with back valves. At that dimension of case outlet capacity of fan is 14 mm longer.



## SET OF SUPPLY

The following articles are included in the supplied set:

- Fan - 1pc.;
- User's manual;
- Packing box;
- Screws: 4pcs;  
(except models 100, 125, 150 VKO/VKO1)
- sealing gasket - 2 pcs;  
(for models 125, 150 MAO1/MAO2)
- tie-bolt - 2 pcs.  
(for models 125, 150 MAO1/MAO2)

## SAFETY REQUIREMENTS

The fan VENTS complies with the requirements according to the EU norms and directives, to the relevant EU-Low Voltage Equipment Directives, EU-Directives on Electromagnetic Compatibility. Level of protection from access to hazardous parts and waterproof:

IPX4 - VKO , VKO1

IP24 - MA, MAO1, MAO2, X, X1 series

IP34 - K, K1, D, D1, M, PF, PF1,  
M1, M3, S, S1, F, LD, LD1 series.

Connection of fans supplied without electric cords to power supply as well as replacement of electric cord should be performed by skilled electrician.

Fan operation beyond the operational temperature range as well as in rooms with ambient air containing aggressive admixes is prohibited.

**ATTENTION!** Fan operation when restrictions, being able to damage or jam blades of operation wheel, are in flowing part of case, is prohibited.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.



## PREPARATION TO DEVICE OPERATION.

Attention! All maintenance works and connection of fans are to be performed only after switching off mains.

Connection of fans to electric power supply must be performed only through switch with actuation length not less than 3 mm at all poles.

Direction of air-charging is to comply with direction of arrow on the fan case.

VENTS VKO\VKO1 fans are mounting in ventilation air ducts from both ends and nipped with clamps.

VENTS MAO1/MAO2 fans are mounting on the windows .

Fans of other models are inserted in the hole of the air duct and mounted on the wall or ceiling with dowels.

If necessary, ensure conditions to prevent free access to impeller and current-carrying parts of fan by protective means from side of outcome (ventilation grille, protective cowl and so on). Connection of fans to electric power supply is shown in Fig. 1-9.

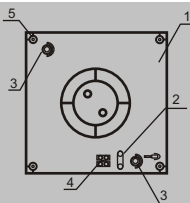
An order in which connection of fans should be made is indicated in Tab.2

Fans Identification	Operations of connection to power supply
VENTS VKO VENTS VKO1 VENTS K VENTS K1 VENTS PF VENTS PF1 VENTS F	Remove protective grid (except model VENTS VKO). Take away a protective cowl. Pass power supply cords through a hole 3, smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Fix cords with the help of clip 2. Reinstall protective cowl and grid back.
VENTS M VENTS M1 VENTS M3 VENTS MA VENTS MAO1 VENTS MAO2	Remove protective grid and cover. Pass power supply cords through a hole 3 (having cut a thin plastic pierce on the spot of opening beforehand). Smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Fix cords with the help of clip 2. Reinstall cover and protective grid back.
VENTS D VENTS D1 VENTS S VENTS S1 VENTS LD VENTS LD1 VENTS X VENTS X1	Remove protective grid and cover. Pass power supply cords through a hole 3 (having cut a thin plastic pierce on the spot of opening beforehand). Smooth out wire rags at length 7-8 mm to clamp terminals 4 against stop to the metal part of the clamp and tighten them with screws. Place power supply cords into housing grooves and fix them in fastening support. Reinstall cover and protective grid back.

table 2

For fans without switch, it is advisable to install power supply switch on fixed power supply wiring. Diagram of connection of fan to fixed power supply wiring is shown in Fig. 10-13

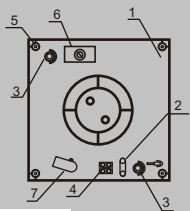




picture 1

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting.

M, M3 -series fans with removed cover.

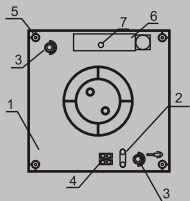


picture 2

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer\
- timer with humidity sensor;
- 7 - pull cord switch.

M, M3 -series fans with removed cover.

Models: T, TH, V, VT, VTH



picture 3

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer with motion sensor;
- 7 - potentiometer T.

M, M3 -series fans with removed cover.

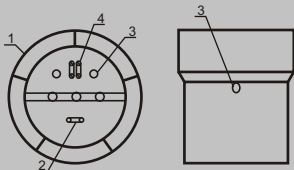
Models: TP

### ATTENTION

*for fans with motion sensors*

The front cover of the fan  
must be uncovered only from  
the side of the motion sensor !

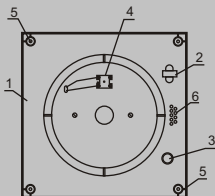




picture 4

**VKO, VKO1, K, K1, PF, PF1, F - series fans with removed cover.**

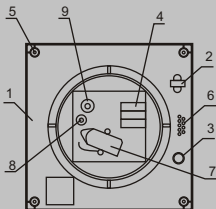
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - lead fixing rack.



picture 5

**D, D1, S, S1, LD, LD1, X, X1, - series fans with removed cover.**

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - lead fixing rack.



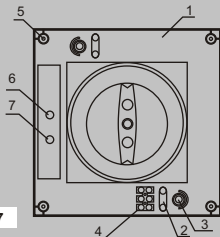
picture 6

**D, D1, S, S1, LD, LD1, X, X1, - series fans with removed cover.**

**Models: T, TH, V, VT, VTH**

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - lead fixing rack;
- 7 - pull cord switch;
- 8 - potentiometer T;
- 9 - potentiometer H.

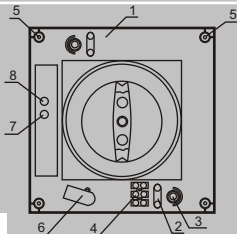




picture 7

**M1, MA, MAO1, MAO2 - series fans with removed cover.**  
**Models: T, TH**

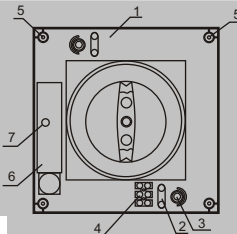
- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - potentiometer T;
- 7 - potentiometer H.



picture 8

**M1, MA, MAO1, MAO2 - series fans with removed cover.**  
**Models: V, VT, VTH**

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - pull cord switch;
- 7 - potentiometer T;
- 8 - potentiometer H.



picture 9

**M1, MA, MAO1, MAO2 - series fans with removed cover.**  
**Models: TP**

- 1 - housing;
- 2 - clip of power supply cords;
- 3 - holes for power supply cords;
- 4 - clamp terminal;
- 5 - holes for fan mounting;
- 6 - timer and motion sensor;
- 7 - potentiometer T.

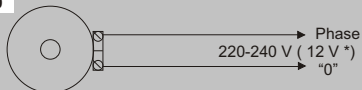
### ATTENTION

*for fans with motion sensors*

The front cover of the fan  
 must be uncovered only from  
 the side of the motion sensor !



picture 10



Power supply feed circuit for fans with built-in switch

picture 11

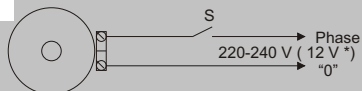


Diagram of connection of fan without built-in switch to circuit, where S is switch installed additionally.

picture 12

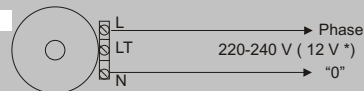


Diagram of connection of fan equipped with timer /timer with humidity relay and built-in switch.

picture 13

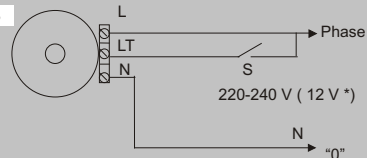


Diagram of connection of fan equipped with timer /timer with humidity relay and without built-in switch.

Diagrams in the Fig. 10, 12 ensure operation of fans, equipped with built-in switch.

Diagrams in the Fig. 11, 13 show connection of fans without built-in switch. Outer switch S is shown.

Fan switch off delay time is adjustable within the range of approx. 2 to 30 minutes. Time can be regulated by potentiometer T. Delay increase direction is clockwise, and delay decrease is anticlockwise).

Fans supplied with timer and humidity relay are turning on by certain humidity level. (50-90%) and are regulated by potentiometer H by rotation clockwise to increase and anticlockwise to decrease level during the time, adjusted by timer.

Fans with timer and movement sensor switch on ventilator when a person moves at a distance from 1 to 4 meters with viewing angle of the sensor of 100° across and automatically switch off the ventilator in time, set by the timer from 2 to 30 minutes (by turning the T regulator clockwise for increase and counterclockwise for decrease of the delay time).

**Attention!** Diagram of timer is situated under circuit potential. It is forbidden to regulate timer's delay time unless fan is switched off the mains. Diagram in Fig. 13 shows connection of lighting lamp to fan's timer controlled by single switch (S is an outer switch).

When lightning lamp is off, fan works during the time, adjusted by timer.

\* - only for 12 V fans (as mentioned on the fan and the box)

## MAINTENANCE

Fan maintenance should be performed only after switching off mains. Maintenance chiefly consists of periodic cleaning of the fan's surfaces of duct and dirt. The fan should be cleaned with soft cloth wetted in soapy water. After cleaning, the surfaces should be wiped dry

## STORAGE

Fan should be stored in original manufacturer's container at a temperature within  $+5^{\circ}\text{C}$  and  $+40^{\circ}\text{C}$  and relative air humidity not more than 80% (at  $T = 25^{\circ}\text{C}$ ).

## WARRANTY

Fans are manufactured at the factory of "Ventilation systems", JSC in compliance with TU U30637114.001-2000, norms and standards at force.

Manufacturer hereby guarantees normal performance of the fan over 60 months since the date of its sale via retail commercial network subject to adherence to the rules of transportation, storage, assembling and operation.

In case of unavailability of indication of the fan's sale date, the warranty term is calculated from the date of manufacture.

In case of occurrence of faults in operation of the fan through the fault of the Manufacturer within the warranty term, consumer shall be eligible for free repair of the device or its replacement at manufacturing enterprise in accordance with relevant provisions of article 14(9) of the Law of Ukraine "On Protection of Consumer's Rights".

Warranty repair or replacement is performed by Manufacturer at 01030, Kyiv, 1 M. Kotsiubynskyi Str. or by Seller.

## ACCEPTANCE CERTIFICATE

The fan has been duly certified as serviceable

Model  
" VENTS "

Manufactured on (date):

Approval mark

Sold

**Name of trading enterprise, stamp of store**

Date of sale:

V01EN-12